

# USP HPLC Method Details – Pain Killers

Analyte	Mobile Phase	System Suitability	UV nm	Column
Morphine Sulfate	Water, methanol (~70:30)+heptanesulfonate+GAC	phenol	284	L1, 30cm
Fentanyl	GRADIENT: (A) triethylamine (aq) pH2.62 w/perchloric acid (B) ACN	Fentanyl Related Compds A, B, D, G, E	206	L7, 15cm
Lorazepam*	ACN(aq) + GAC	RSDs, tailing...	230	L1, 25cm
Midazolam (versed)	ACN (aq) + ammonium acetate, 5.5pH	Col. Effic., tailing & RSD	254	L60, 25cm

\*Note: requires sample compartment chiller, 4°C; column chiller, 5°C; multiple related compounds – A, B, C, D & E

## Other Notes:

- Only the Morphine Sulfate HPLC analysis has been performed prior.
- Only the Agilent Series 1100 HPLC system has autosampler cooling capability; column compartment may not meet requirement.
- Need to purchase an L60-type column.